

Amended claims:

1. **(currently amended)** An apparatus for optical determination of distance to a feature, said apparatus comprising:

a) a beam generation unit for launching a reference beam on a reference path and a first beam on a first path;

b) a rotation mechanism for rotating said reference path and said first path about a center along a line of said reference path and not along a line of said first path, wherein said line of said reference path and said line of said first path are non-parallel, and wherein said reference beam moves over said feature at a reference time t_r and said first beam moves over said feature and at a first time t_1 ;

c) a determination unit for determining a distance r from said center to said feature from an angular velocity ω of said reference beam over said feature and from said times t_r , t_1 .

2. **(original)** The apparatus of claim 1, wherein at least one of said reference path and said first path further comprise a non-collinear folded path portion.

3. **(original)** The apparatus of claim 1, wherein said rotation mechanism comprises at least one element selected from the group consisting of mirrors, refractive elements, diffractive elements and holographic elements.

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1 4. **(original)** The apparatus of claim 1, wherein said
2 reference path and said first path are in a common
3 plane Σ .
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1 5. **(original)** The apparatus of claim 1, wherein said
2 determination unit comprises a detector for
3 detecting said reference beam and said first beam.
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1 6. **(original)** The apparatus of claim 1, wherein said
2 beam generation unit comprises a reference source
3 for launching said reference beam and a first source
4 for launching said first beam.
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1 7. **(original)** The apparatus of claim 6, wherein
2 said beam generation unit comprises an active
3 array of sources.
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1 8. **(original)** The apparatus of claim 6, wherein
2 said reference source and said first source have
3 distinct generation modes for endowing said
4 reference beam and said first beam with mutually
5 distinguishing properties.
6

1 9. **(original)** The apparatus of claim 8, wherein
2 said distinguishing properties are selected
3 from the group consisting of polarization,
4 wavelength, temporal beam format and
5 intensity.
6

1 10. **(original)** The apparatus of claim 9,
2 wherein said distinguishing properties
3 comprise wavelength and said
4 determination unit comprises at least one
5 wavelength filter.

1 11. **(original)** The apparatus of claim 9,
2 wherein said determination unit comprises
3 a reference detector for detecting said
4 reference beam and a first detector for
5 detecting said first beam.

1 12. **(currently amended)** The apparatus of claim 1,
2 wherein said beam generation unit launches a second
3 beam on a second path chosen such that said center
4 is along a line of said second path, said rotation
5 mechanism rotates said second path such that said
6 second beam moves over said feature at a second time
7 t_2 , and said determination unit determines said
8 angular velocity ω of said reference beam from said
9 times t_r , t_2 .

1 13. **(original)** The apparatus of claim 12, wherein
2 said beam generation unit comprises a second
3 source for launching said second beam, and
4 wherein said second source has a distinct
5 generation mode for endowing said second beam
6 with a distinguishing property selected from the
7 group consisting of polarization, wavelength,
8 temporal beam format and intensity.

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1 14. **(original)** The apparatus of claim 12, wherein
2 said reference path, said first path and said
3 second path are in a common plane Σ .
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1 15. **(original)** The apparatus of claim 1, further
2 comprising an angular velocity unit for measuring
3 said angular velocity ω of said reference beam, said
4 angular velocity unit being in communication with
5 said determination unit.
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1 16. **(original)** The apparatus of claim 1, wherein said
2 feature is selected from the group consisting of
3 micro-structure and macro-structure.
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1 17. **(currently amended)** An apparatus for optical
2 determination of distance to a feature, said apparatus
3 comprising:

4 a) a beam generation unit for launching a reference
5 beam on a reference path, ~~and~~ a first beam on a
6 first path and a second beam on a second path;

7 b) a rotation mechanism for rotating said reference
8 path, ~~and~~ said first path and said second path about
9 a center ~~not~~ along a line of said reference path and
10 not along a line of said first path, whereby said
11 reference beam moves over said feature at a
12 reference time t_{r1} ~~and~~ said first beam moves over
13 said feature and at a first time t_1 and said second
14 beam moves over said feature at a time t_2 ;

15 c) a determination unit for determining a distance r
16 from said center to said feature from an angular
17 velocity ω of said reference beam over said feature
18 from said times t_r , t_1 , and determining said angular
19 velocity ω of said reference beam from said times
20 t_r , t_2 .

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1 18. **(currently amended)** An apparatus for optical
2 determination of distance to a feature, said apparatus
3 comprising:

4 a) a radiation detection unit for detecting radiation
5 on a reference path and on a first path;

6 b) a rotation mechanism for rotating said reference
7 path and said first path about a center along a line
8 of said reference path and not along a line of said
9 first path, wherein said line of said reference path
10 and said line of said first path are non-parallel,
11 and whereby said radiation from said feature is
12 detected on said reference path at a at a reference
13 time t_r and on said first path at a first time t_1 ;

14 c) a determination unit for determining a distance r
15 from said center to said feature from an angular
16 velocity ω of said reference path over said feature
17 and from said times t_r , t_1 .

1 19. **(currently amended)** A method for optical determination
2 of distance to a feature, said method comprising:

3 a) launching a reference beam on a reference path and a
4 first beam on a first path;

5 b) rotating said reference path and said first path
6 about a center along a line of said reference path

7 and not along a line of said first path, wherein
8 said line of said reference path and said line of
9 said first path are non-parallel, and whereby said
10 reference beam moves over said feature at a
11 reference time t_r and said first beam moves over
12 said feature at a first time t_1 ;

13 c) determining a distance r from said center to said
14 feature from an angular velocity ω of said reference
15 beam over said feature and from said times t_r , t_1 .

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1 20. **(original)** The method of claim 19, further
2 comprising adding a non-collinear folded path
3 portion to at least one of said reference path and
4 said first path.

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1 21. **(original)** The method of claim 19, wherein said step
2 of rotating is performed with at least one element
3 selected from the group consisting of mirrors,
4 refractive elements, diffractive elements and
5 holographic elements.

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1 22. **(original)** The method of claim 19, wherein said
2 reference path and said first path are arranged in a
3 common plane Σ .

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1 23. **(original)** The method of claim 19, further
2 comprising endowing said reference beam and said
3 first beam with mutually distinguishing properties.

1 24. **(original)** The method of claim 23, wherein said
2 distinguishing properties are selected from the
3 group consisting of polarization, wavelength,
4 temporal beam format and intensity.

1 25. **(original)** The method of claim 19, further
2 comprising:

3 a) launching a second beam on a second path chosen
4 such that said center is along a line of said
5 second path;

6 b) rotating said second path together with said
7 reference path and said first path about said
8 center such that said second beam moves over
9 said feature at a second time t_2 ; and

10 c) determining said angular velocity ω of said
11 reference beam from said times t_r , t_2 .

1 26. **(original)** The method of claim 25, further
2 comprising endowing said second beam with a
3 distinguishing property.

1 27. **(original)** The method of claim 26, wherein
2 said distinguishing property is selected
3 from the group consisting of polarization,
4 wavelength, temporal beam format and
5 intensity.

1 28. **(original)** The method of claim 25, wherein said
2 reference path, said first path and said second
3 path are in a common plane Σ .

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1 29. **(original)** The method of claim 19, further
2 comprising measuring said angular velocity ω with an
3 angular velocity unit.
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1 30. **(original)** The method of claim 19, wherein said
2 feature is selected from the group consisting of
3 micro-structure and macro-structure.
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1 31. **(currently amended)** A method for optical determination
2 of distance to a feature, said method comprising:

3 a) launching a reference beam on a reference path, ~~and~~
4 a first beam on a first path and a second beam on a
5 second path;

6 b) rotating said reference path, ~~and~~ said first path
7 and said second path about a center ~~not~~ along a line
8 of said reference path and not along a line of said
9 first path, whereby said reference beam moves over
10 said feature at a reference time t_r , ~~and~~ said first
11 beam moves over said feature at a first time t_1 and
12 said second beam moves over said feature at a time
13 t_2 ;

14 c) determining a distance r from said center to said
15 feature from an angular velocity ω of said reference
16 beam over said feature and from said times t_r , t_1 .

17 d) determining said angular velocity ω of said
18 reference beam from said times t_r , t_2 .
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1 32. (presently amended) A method for optical determination
2 of distance to a feature, said method comprising:

3 a) providing a reference path and a first path for a
4 radiation;

5 b) rotating said reference path and said first path
6 about a center along a line of said reference path
7 and not along a line of said first path, wherein
8 said line of said reference path and said line of
9 said first path are non-parallel, and whereby
10 radiation from said feature is detected on said
11 reference path at a reference time t_r and on said
12 first path at a first time t_1 ;

13 d) determining a distance r from said center to said
14 feature from an angular velocity ω of said reference
15 path over said feature and from said times t_r , t_1 .

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